



(12) **United States Patent**
Barak et al.

(10) **Patent No.:** **US 9,350,598 B2**
(45) **Date of Patent:** **May 24, 2016**

(54) **AUTHENTICATION OF SERVICE REQUESTS
USING A COMMUNICATIONS INITIATION
FEATURE**

(71) Applicant: **LivePerson, Inc.**, New York, NY (US)

(72) Inventors: **Matan Barak**, Ra'anana (IL); **Todd
Lewis**, Laguna Hills, CA (US); **Justin
Robert Mulhearn**, Whittier, CA (US)

(73) Assignee: **Liveperson, Inc.**, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 292 days.

(21) Appl. No.: **13/829,708**

(22) Filed: **Mar. 14, 2013**

(65) **Prior Publication Data**

US 2013/0290533 A1 Oct. 31, 2013

Related U.S. Application Data

(60) Provisional application No. 61/625,984, filed on Apr.
18, 2012.

(51) **Int. Cl.**
G06F 15/173 (2006.01)
H04L 12/24 (2006.01)
H04L 12/58 (2006.01)

(52) **U.S. Cl.**
CPC **H04L 41/00** (2013.01); **H04L 51/046**
(2013.01); **H04L 51/32** (2013.01)

(58) **Field of Classification Search**
CPC H04L 41/00; H04L 51/32; H04L 51/046;
H04L 12/24; H04L 67/22; H04L 67/30;
H04L 67/303; H04L 67/306
USPC 709/206, 217, 218, 229, 225
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,881,261 A 11/1989 Oliphant et al.
5,187,735 A 2/1993 Herrero Garcia et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP 840244 A1 5/1998
EP 1233361 A1 8/2002

(Continued)

OTHER PUBLICATIONS

Chartrand Sabra, "A new system seeks to ease the bottleneck in the
customer-service information highway," The New York Times (Apr.
30, 2001), 2 pages.

(Continued)

Primary Examiner — Cheikh Ndiaye

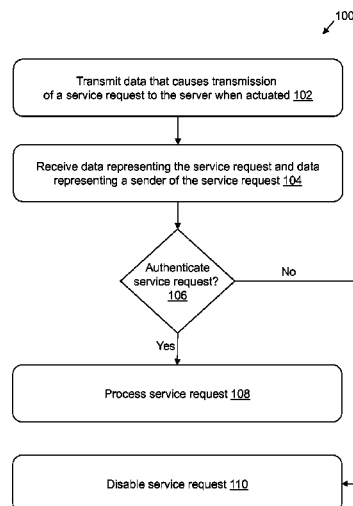
(74) *Attorney, Agent, or Firm* — Kilpatrick Townsend &
Stockton LLP

(57)

ABSTRACT

Described are computer-based methods and apparatuses,
including computer program products, for facilitating com-
munications initiated through a social networking account. A
detected message communicated using a social networking
account can be determined to satisfy a response criteria. Code
for displaying a communications initiation feature on a cus-
tomer communications apparatus associated with the social
networking account can be transmitted. Selection informa-
tion representing a selection of the communications initiation
feature can be received and can include a parameter associ-
ated with the selection and origin information. The selection
information can be validated by determining that the selection
is associated with the social networking account and by com-
paring the parameter with a stored credential associated with
the communications initiation feature. When the selection is
validated, the communications can be facilitated.

30 Claims, 2 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,206,903	A	4/1993	Kohler et al.	5,859,974	A	1/1999	McArdle et al.
5,208,748	A	5/1993	Flores et al.	5,862,330	A	1/1999	Anupam et al.
5,235,519	A	8/1993	Miura	5,866,889	A	2/1999	Weiss et al.
5,239,462	A	8/1993	Jones et al.	5,870,721	A	2/1999	Norris
5,262,941	A	11/1993	Saladin et al.	5,878,403	A	3/1999	DeFrancesco et al.
5,289,371	A	2/1994	Abel et al.	5,895,454	A	4/1999	Harrington
5,319,542	A	6/1994	King et al.	5,903,641	A	5/1999	Tonisson
5,351,186	A	9/1994	Bullock et al.	5,907,677	A	5/1999	Glenn et al.
5,372,507	A	12/1994	Goleh	5,911,135	A	6/1999	Atkins
5,375,055	A	12/1994	Togher et al.	5,916,302	A	6/1999	Dunn et al.
5,387,783	A	2/1995	Mihm et al.	5,918,014	A	6/1999	Robinson
5,450,537	A	9/1995	Hirai et al.	5,924,082	A	7/1999	Silverman et al.
5,517,405	A	5/1996	McAndrew et al.	5,930,776	A	7/1999	Dykstra et al.
5,563,805	A	10/1996	Arbuckle et al.	5,940,811	A	8/1999	Norris
5,572,643	A	11/1996	Judson	5,940,812	A	8/1999	Tengel et al.
5,581,702	A	12/1996	McArdle et al.	5,943,416	A	8/1999	Gisby
5,583,763	A	12/1996	Atcheson et al.	5,943,478	A	8/1999	Aggarwal et al.
5,590,038	A	12/1996	Pitroda	5,945,989	A	8/1999	Freishtat et al.
5,592,378	A	1/1997	Cameron et al.	5,948,061	A	9/1999	Merriman et al.
5,611,052	A	3/1997	Dykstra et al.	5,950,179	A	9/1999	Buchanan et al.
5,636,346	A	6/1997	Saxe	5,956,693	A	9/1999	Geerlings
5,664,115	A	9/1997	Fraser	5,958,014	A	9/1999	Cave
5,668,953	A	9/1997	Sloo	5,960,411	A	9/1999	Hartman et al.
5,678,002	A	10/1997	Fawcett et al.	5,963,625	A	10/1999	Kawecki et al.
5,694,163	A	12/1997	Harrison	5,963,635	A	10/1999	Szlam
5,696,907	A	12/1997	Tom	5,966,699	A	10/1999	Zandi
5,699,526	A	12/1997	Siefert	5,970,475	A	10/1999	Barnes et al.
5,704,029	A	12/1997	Wright	5,970,478	A	10/1999	Walker et al.
5,710,887	A	1/1998	Chelliah et al.	5,974,396	A	10/1999	Anderson
5,715,402	A	2/1998	Popolo	5,974,446	A	10/1999	Sonnenreich et al.
5,724,155	A	3/1998	Saito	5,987,434	A	11/1999	Libman
5,724,522	A	3/1998	Kagami et al.	5,991,740	A	11/1999	Messer
5,727,048	A	3/1998	Hiroshima et al.	5,995,947	A	11/1999	Fraser et al.
5,727,163	A	3/1998	Bezos	6,000,832	A	12/1999	Franklin et al.
5,732,400	A	3/1998	Mandler et al.	6,003,013	A	12/1999	Boushy
5,745,654	A	4/1998	Titan	6,009,410	A	12/1999	LeMole et al.
5,748,755	A	5/1998	Johnson et al.	6,014,644	A	1/2000	Erickson
5,758,328	A	5/1998	Giovannoli	6,014,645	A	1/2000	Cunningham
5,760,771	A	6/1998	Blonder et al.	6,014,647	A	1/2000	Nizzari
5,761,640	A	6/1998	Kalyanswamy et al.	6,016,504	A	1/2000	Arnold et al.
5,761,649	A	6/1998	Hill	6,026,370	A	2/2000	Jermyn
5,764,916	A	6/1998	Busey et al.	6,028,601	A	2/2000	Machiraju et al.
5,765,142	A	6/1998	Allred et al.	6,029,141	A	2/2000	Bezos et al.
5,774,869	A	6/1998	Toader	6,029,149	A	2/2000	Dykstra et al.
5,774,870	A	6/1998	Storey	6,029,890	A	2/2000	Austin
5,774,882	A	6/1998	Keen et al.	6,044,146	A	3/2000	Gisby
5,774,883	A	6/1998	Andersen et al.	6,044,360	A	3/2000	Picciallo
5,778,164	A	7/1998	Watkins et al.	6,049,784	A	4/2000	Weatherly et al.
5,784,568	A	7/1998	Needham	6,052,447	A	4/2000	Golden
5,793,365	A	8/1998	Tang et al.	6,052,730	A	4/2000	Felciano
5,794,207	A	8/1998	Walker et al.	6,055,573	A	4/2000	Gardenswartz et al.
5,796,393	A	8/1998	MacNaughton et al.	6,058,375	A	5/2000	Park
5,797,133	A	8/1998	Jones et al.	6,058,428	A	5/2000	Wang et al.
5,799,151	A	8/1998	Hoffer	6,061,658	A	5/2000	Chou et al.
5,805,159	A	9/1998	Bertram et al.	6,064,987	A	5/2000	Walker et al.
5,806,043	A	9/1998	Toader	6,067,525	A	5/2000	Jonhson et al.
5,812,769	A	9/1998	Graber et al.	6,070,149	A	5/2000	Tavor et al.
5,815,663	A	9/1998	Uomini	6,073,112	A	6/2000	Geerlings
5,818,907	A	10/1998	Mahoney et al.	6,076,100	A	6/2000	Cotrille et al.
5,819,029	A	10/1998	Edwards et al.	6,078,892	A	6/2000	Anderson et al.
5,819,235	A	10/1998	Tamai et al.	6,084,585	A	7/2000	Kraft et al.
5,819,236	A	10/1998	Josephson	6,085,126	A	7/2000	Mellgren, III et al.
5,819,291	A	10/1998	Haimowitz et al.	6,085,195	A	7/2000	Hoyt et al.
5,825,869	A	10/1998	Brooks et al.	6,088,686	A	7/2000	Walker et al.
5,826,241	A	10/1998	Stein et al.	6,105,007	A	8/2000	Norris
5,826,244	A	10/1998	Huberman	6,112,190	A	8/2000	Fletcher et al.
5,828,839	A	10/1998	Moncreiff	6,119,101	A	9/2000	Peckover
5,832,465	A	11/1998	Tom	6,119,103	A	9/2000	Basch et al.
5,835,087	A	11/1998	Herz et al.	6,131,087	A	10/2000	Luke et al.
5,838,682	A	11/1998	Dekelbaum et al.	6,131,095	A	10/2000	Low et al.
5,838,910	A	11/1998	Domenikos et al.	6,134,318	A	10/2000	O'Neil
5,839,117	A	11/1998	Cameron et al.	6,134,530	A	10/2000	Bunting et al.
5,850,517	A	12/1998	Verkler et al.	6,134,532	A	10/2000	Lazarus et al.
5,852,809	A	12/1998	Abel et al.	6,134,533	A	10/2000	Shell
5,857,079	A	1/1999	Claus et al.	6,134,548	A	10/2000	Gottzman et al.
				6,138,139	A	10/2000	Beck et al.
				6,141,653	A	10/2000	Conklin et al.
				6,144,991	A	11/2000	England
				6,163,607	A	12/2000	Bogart et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

6,167,395	A	12/2000	Beck et al.	6,760,429	B1	7/2004	Hung et al.
6,170,011	B1	1/2001	Macleod Beck et al.	6,766,302	B2	7/2004	Bach
6,173,053	B1	1/2001	Bogart et al.	6,771,766	B1	8/2004	Shaflee et al.
6,182,050	B1	1/2001	Ballard	6,795,812	B1	9/2004	Lent et al.
6,182,124	B1	1/2001	Lau et al.	6,804,659	B1	10/2004	Graham et al.
6,185,543	B1	2/2001	Galperin et al.	6,826,594	B1	11/2004	Pettersen
6,189,003	B1	2/2001	Leal	6,829,585	B1	12/2004	Grewal et al.
6,192,319	B1	2/2001	Simonson	6,836,768	B1	12/2004	Hirsh
6,192,380	B1	2/2001	Light et al.	6,839,680	B1	1/2005	Liu
6,199,079	B1	3/2001	Gupta et al.	6,850,896	B1	2/2005	Kelman et al.
6,202,053	B1	3/2001	Christiansen et al.	6,865,267	B2	3/2005	Dezonno
6,202,155	B1	3/2001	Tushie et al.	6,892,226	B1	5/2005	Tso et al.
6,208,979	B1	3/2001	Sinclair	6,892,347	B1	5/2005	Williams
6,222,919	B1	4/2001	Hollatz et al.	6,904,408	B1	6/2005	McCarthy et al.
6,236,975	B1	5/2001	Boe et al.	6,920,434	B1	7/2005	Cossette
6,240,396	B1	5/2001	Walker et al.	6,922,705	B1	7/2005	Northrup
6,249,795	B1	6/2001	Douglis	6,925,441	B1	8/2005	Jones
6,262,730	B1	7/2001	Horvitz	6,925,442	B1	8/2005	Shapira et al.
6,267,292	B1	7/2001	Walker et al.	6,950,983	B1	9/2005	Snaveley
6,272,506	B1	8/2001	Bell	6,965,868	B1	11/2005	Bednarek
6,282,284	B1	8/2001	Dezonno et al.	6,981,028	B1	12/2005	Rawat et al.
6,285,983	B1	9/2001	Jenkins	6,993,557	B1	1/2006	Yen
6,289,319	B1	9/2001	Lockwood	7,003,476	B1	2/2006	Samra et al.
6,292,786	B1	9/2001	Deaton et al.	7,039,599	B2	5/2006	Merriman et al.
6,295,061	B1	9/2001	Park et al.	7,051,273	B1	5/2006	Holt et al.
6,298,348	B1	10/2001	Eldering	7,076,443	B1	7/2006	Emens et al.
6,311,169	B2	10/2001	Duhon	7,085,682	B1	8/2006	Heller et al.
6,311,178	B1	10/2001	Bi et al.	7,092,959	B2	8/2006	Chen
6,324,524	B1	11/2001	Lent et al.	7,106,850	B2	9/2006	Campbell et al.
6,327,574	B1	12/2001	Kramer et al.	7,143,063	B2	11/2006	Lent et al.
6,330,546	B1	12/2001	Gopinathan et al.	7,181,492	B2	2/2007	Wen et al.
6,334,110	B1	12/2001	Walter	7,200,614	B2	4/2007	Reid et al.
6,338,066	B1	1/2002	Martin	7,242,760	B2	7/2007	Shires
6,346,952	B1	2/2002	Shtivelman	7,243,109	B2	7/2007	Omega et al.
6,349,290	B1	2/2002	Horowitz et al.	7,251,648	B2	7/2007	Chaudhuri et al.
6,356,909	B1	3/2002	Spencer	7,266,510	B1	9/2007	Cofino
6,374,230	B1	4/2002	Walker et al.	7,287,000	B2	10/2007	Boyd et al.
6,377,936	B1	4/2002	Henrick et al.	7,313,575	B2	12/2007	Carr et al.
6,381,640	B1	4/2002	Beck	7,337,127	B1	2/2008	Smith et al.
6,385,594	B1	5/2002	Lebda et al.	7,346,576	B2	3/2008	Lent et al.
6,393,479	B1	5/2002	Glommen et al.	7,346,604	B1	3/2008	Bharat et al.
6,405,181	B2	6/2002	Lent et al.	7,346,606	B2	3/2008	Bharat
6,438,526	B1	8/2002	Dykes et al.	7,370,002	B2	5/2008	Heckerman et al.
6,449,358	B1	9/2002	Anisimov	7,376,603	B1	5/2008	Mayr et al.
6,449,646	B1	9/2002	Sikora et al.	7,403,973	B2	7/2008	Wilsher et al.
6,463,149	B1	10/2002	Jolissaint et al.	7,424,363	B2	9/2008	Cheng
6,466,970	B1	10/2002	Lee	7,523,191	B1	4/2009	Thomas et al.
6,477,533	B2	11/2002	Schiff et al.	7,526,439	B2	4/2009	Freishtat et al.
6,507,851	B1	1/2003	Fujiwara et al.	7,536,320	B2	5/2009	McQueen et al.
6,510,418	B1	1/2003	Case et al.	7,552,080	B1	6/2009	Willard et al.
6,510,427	B1	1/2003	Bossemeyer, Jr. et al.	7,590,550	B2	9/2009	Schoenberg
6,516,421	B1	2/2003	Peters	7,630,986	B1	12/2009	Herz et al.
6,519,628	B1	2/2003	Locascio	7,650,381	B2	1/2010	Peters
6,535,492	B2	3/2003	Shtivelman	7,657,465	B2	2/2010	Freishtat et al.
6,542,936	B1	4/2003	Mayle et al.	7,689,924	B1	3/2010	Schneider et al.
6,546,372	B2	4/2003	Lauffer	7,702,635	B2	4/2010	Horvitz et al.
6,549,919	B2	4/2003	Lambert et al.	7,716,322	B2	5/2010	Benedikt et al.
6,567,791	B2	5/2003	Lent et al.	7,734,503	B2	6/2010	Agarwal et al.
6,571,236	B1	5/2003	Ruppelt	7,734,632	B2	6/2010	Wang
6,597,377	B1	7/2003	MacPhai	7,739,149	B2	6/2010	Freishtat et al.
6,606,744	B1	8/2003	Mikurak	7,818,340	B1	10/2010	Warren
6,618,746	B2	9/2003	Desai et al.	7,827,128	B1	11/2010	Karlsson et al.
6,622,131	B1	9/2003	Brown et al.	7,865,457	B2	1/2011	Ravin et al.
6,622,138	B1	9/2003	Bellamkonda	7,877,679	B2	1/2011	Ozana
6,654,815	B1	11/2003	Goss	7,958,066	B2	6/2011	Pinckney et al.
6,662,215	B1	12/2003	Moskowitz et al.	7,966,564	B2	6/2011	Catlin et al.
6,665,395	B1	12/2003	Busey et al.	7,975,020	B1	7/2011	Green et al.
6,671,818	B1	12/2003	Mikurak	8,010,422	B1	8/2011	Lascelles et al.
6,691,151	B1	2/2004	Cheyet et al.	8,185,544	B2	5/2012	Oztekin et al.
6,691,159	B1	2/2004	Grewal et al.	8,260,846	B2	9/2012	Lahav
6,701,441	B1	3/2004	Balasubramaniam et al.	8,266,127	B2	9/2012	Mattox et al.
6,718,313	B1	4/2004	Lent et al.	8,386,340	B1	2/2013	Feinstein
6,721,713	B1	4/2004	Guheen et al.	8,392,580	B2	3/2013	Allen et al.
6,725,210	B1	4/2004	Key	8,738,732	B2	5/2014	Karidi
6,741,995	B1	5/2004	Chen	8,762,313	B2	6/2014	Lahav et al.
				8,799,200	B2	8/2014	Lahav
				8,805,844	B2	8/2014	Schorzman et al.
				8,805,941	B2	8/2014	Barak et al.
				8,868,448	B2	10/2014	Freishtat et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

8,918,465	B2	12/2014	Barak	2004/0153368	A1	8/2004	Freishtat et al.
8,943,002	B2	1/2015	Zelenko et al.	2004/0163101	A1	8/2004	Swix et al.
8,943,145	B1 *	1/2015	Peters et al. 709/206	2004/0167928	A1	8/2004	Anderson et al.
8,954,539	B2	2/2015	Lahav	2004/0193377	A1	9/2004	Brown
9,104,970	B2	8/2015	Lahav et al.	2004/0210820	A1	10/2004	Tarr et al.
2001/0011245	A1	8/2001	Duhon	2004/0243539	A1	12/2004	Skurtovich et al.
2001/0011246	A1	8/2001	Tammaro	2004/0260574	A1	12/2004	Gross
2001/0011262	A1	8/2001	Hoyt et al.	2005/0004864	A1	1/2005	Lent et al.
2001/0011282	A1	8/2001	Katsumata et al.	2005/0014117	A1	1/2005	Stillman
2001/0013009	A1	8/2001	Greening	2005/0033641	A1	2/2005	Jha et al.
2001/0014877	A1	8/2001	Defrancesco et al.	2005/0033728	A1	2/2005	James
2001/0025249	A1	9/2001	Tokunaga	2005/0044149	A1	2/2005	Regardie et al.
2001/0027436	A1	10/2001	Tenembaum	2005/0096997	A1	5/2005	Jain et al.
2001/0032140	A1	10/2001	Hoffman	2005/0097089	A1	5/2005	Nielsen et al.
2001/0032244	A1	10/2001	Neustel	2005/0102177	A1	5/2005	Takayama
2001/0034689	A1	10/2001	Heilman	2005/0114195	A1	5/2005	Bernasconi
2001/0044751	A1	11/2001	Pugliese	2005/0132205	A1	6/2005	Palliyil et al.
2001/0054041	A1	12/2001	Chang	2005/0138115	A1	6/2005	Llamas et al.
2001/0054064	A1	12/2001	Kannan	2005/0171861	A1	8/2005	Bezos et al.
2001/0056405	A1	12/2001	Muyres	2005/0183003	A1	8/2005	Peri
2002/0002491	A1	1/2002	Whitfield	2005/0198120	A1	9/2005	Reshef et al.
2002/0004735	A1	1/2002	Gross	2005/0198212	A1	9/2005	Zilberfayn et al.
2002/0010625	A1	1/2002	Smith et al.	2005/0198220	A1	9/2005	Wada et al.
2002/0016731	A1	2/2002	Kupersmit	2005/0216342	A1	9/2005	Ashbaugh
2002/0023051	A1	2/2002	Kunzle et al.	2005/0256955	A1	11/2005	Bodwell et al.
2002/0026351	A1	2/2002	Coleman	2005/0262065	A1	11/2005	Barth et al.
2002/0029188	A1	3/2002	Schmid	2005/0288943	A1	12/2005	Wei et al.
2002/0029267	A1	3/2002	Sankuratripati et al.	2006/0015390	A1	1/2006	Rijsinghani et al.
2002/0035486	A1	3/2002	Huyn et al.	2006/0021009	A1	1/2006	Lunt
2002/0038230	A1	3/2002	Chen	2006/0026147	A1	2/2006	Cone et al.
2002/0045154	A1	4/2002	Wood	2006/0026237	A1	2/2006	Wang et al.
2002/0046086	A1	4/2002	Pletz	2006/0041476	A1	2/2006	Zheng
2002/0046096	A1	4/2002	Srinivasan	2006/0041562	A1	2/2006	Paczkowski et al.
2002/0047859	A1	4/2002	Szlam et al.	2006/0047615	A1	3/2006	Ravin et al.
2002/0055878	A1	5/2002	Burton et al.	2006/0059124	A1	3/2006	Krishna
2002/0059095	A1	5/2002	Cook	2006/0106788	A1	5/2006	Forrest
2002/0067500	A1	6/2002	Yokomizo et al.	2006/0122850	A1	6/2006	Ward et al.
2002/0073162	A1	6/2002	McErlean	2006/0168509	A1	7/2006	Boss et al.
2002/0082923	A1	6/2002	Merriman et al.	2006/0253319	A1	11/2006	Chayes et al.
2002/0083095	A1	6/2002	Wu et al.	2006/0265495	A1	11/2006	Butler et al.
2002/0083167	A1	6/2002	Costigan et al.	2006/0271545	A1	11/2006	Youn et al.
2002/0085705	A1	7/2002	Shires	2006/0277477	A1	12/2006	Christenson
2002/0091832	A1	7/2002	Low et al.	2006/0282327	A1	12/2006	Neal et al.
2002/0107728	A1	8/2002	Bailey et al.	2006/0282328	A1	12/2006	Gerace et al.
2002/0111850	A1	8/2002	Smrcka et al.	2006/0284378	A1	12/2006	Snow et al.
2002/0123926	A1	9/2002	Bushold et al.	2006/0284892	A1	12/2006	Sheridan
2002/0161620	A1	10/2002	Hatanaka	2006/0288087	A1	12/2006	Sun
2002/0161664	A1	10/2002	Shaya et al.	2006/0293950	A1	12/2006	Meek et al.
2002/0167539	A1	11/2002	Brown et al.	2007/0027771	A1	2/2007	Collins et al.
2003/0009768	A1	1/2003	Moir	2007/0027785	A1	2/2007	Lent et al.
2003/0011641	A1	1/2003	Totman et al.	2007/0053513	A1	3/2007	Hoffberg
2003/0014304	A1	1/2003	Calvert et al.	2007/0061412	A1	3/2007	Karidi et al.
2003/0023754	A1	1/2003	Eichstadt et al.	2007/0061421	A1	3/2007	Karidi
2003/0029415	A1	2/2003	Pfäeffle et al.	2007/0073585	A1	3/2007	Apple et al.
2003/0036949	A1	2/2003	Kaddeche et al.	2007/0094228	A1	4/2007	Nevin et al.
2003/0041056	A1	2/2003	Bossemeyer et al.	2007/0100653	A1	5/2007	Ramer et al.
2003/0055778	A1	3/2003	Erlanger	2007/0100688	A1	5/2007	Book
2003/0079176	A1	4/2003	Kang et al.	2007/0116238	A1	5/2007	Jacobi
2003/0105826	A1	6/2003	Mayraz	2007/0116239	A1	5/2007	Jacobi
2003/0110130	A1	6/2003	Pelletier	2007/0162501	A1	7/2007	Agassi et al.
2003/0140037	A1	7/2003	Deh-Lee	2007/0206086	A1	9/2007	Baron et al.
2003/0149581	A1	8/2003	Chaudhri et al.	2007/0239527	A1	10/2007	Nazer et al.
2003/0149937	A1	8/2003	McElfresh et al.	2007/0250585	A1	10/2007	Ly et al.
2003/0154196	A1	8/2003	Goodwin et al.	2007/0260596	A1	11/2007	Koran et al.
2003/0167195	A1	9/2003	Fernandes et al.	2007/0265873	A1	11/2007	Sheth et al.
2003/0177096	A1	9/2003	Trent et al.	2008/0021816	A1	1/2008	Lent et al.
2003/0195848	A1	10/2003	Felger	2008/0033794	A1	2/2008	Ou et al.
2003/0217332	A1	11/2003	Smith et al.	2008/0033941	A1	2/2008	Parrish
2003/0221163	A1	11/2003	Glover et al.	2008/0040225	A1	2/2008	Roker
2003/0233425	A1	12/2003	Lyons et al.	2008/0072170	A1	3/2008	Simons
2004/0034567	A1	2/2004	Gravett	2008/0133650	A1	6/2008	Saarimaki et al.
2004/0064412	A1	4/2004	Phillips et al.	2008/0147480	A1	6/2008	Sarma et al.
2004/0088323	A1	5/2004	Elder et al.	2008/0147486	A1	6/2008	Wu et al.
2004/0128390	A1	7/2004	Blakley et al.	2008/0147741	A1	6/2008	Gonen et al.
2004/0141016	A1	7/2004	Fukatsu et al.	2008/0201436	A1	8/2008	Gartner
				2008/0215541	A1	9/2008	Li et al.
				2008/0222656	A1	9/2008	Lyman
				2008/0244024	A1	10/2008	Aaltonen et al.
				2008/0262897	A1	10/2008	Howarter et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2008/0270294	A1	10/2008	Lent et al.	
2008/0270295	A1	10/2008	Lent et al.	
2008/0319778	A1	12/2008	Abhyanker	
2009/0006174	A1	1/2009	Lauffer	
2009/0006179	A1	1/2009	Billingsley et al.	
2009/0006622	A1	1/2009	Doerr	
2009/0030859	A1	1/2009	Buchs et al.	
2009/0055267	A1	2/2009	Roker	
2009/0063645	A1	3/2009	Casey et al.	
2009/0076887	A1	3/2009	Spivack et al.	
2009/0099904	A1	4/2009	Affeld et al.	
2009/0119173	A1	5/2009	Parsons et al.	
2009/0132368	A1	5/2009	Cotter et al.	
2009/0138606	A1	5/2009	Moran et al.	
2009/0164171	A1	6/2009	Wold et al.	
2009/0177771	A1	7/2009	Britton et al.	
2009/0210405	A1	8/2009	Ortega et al.	
2009/0222572	A1	9/2009	Fujihara	
2009/0287534	A1	11/2009	Guo et al.	
2009/0287633	A1	11/2009	Nevin et al.	
2009/0293001	A1	11/2009	Lu et al.	
2009/0307003	A1	12/2009	Benyamin et al.	
2009/0319296	A1	12/2009	Schoenberg	
2009/0327863	A1	12/2009	Holt et al.	
2010/0023475	A1	1/2010	Lahav	
2010/0023581	A1	1/2010	Lahav	
2010/0049602	A1	2/2010	Softky	
2010/0063879	A1	3/2010	Araradian et al.	
2010/0106552	A1	4/2010	Barillaud	
2010/0125657	A1	5/2010	Dowling et al.	
2010/0205024	A1	8/2010	Shachar et al.	
2010/0255812	A1	10/2010	Nanjundaiah et al.	
2010/0281008	A1	11/2010	Braunwarth	
2010/0306043	A1	12/2010	Lindsay et al.	
2011/0041168	A1	2/2011	Murray et al.	
2011/0055207	A1	3/2011	Schorzman et al.	
2011/0055331	A1	3/2011	Adelman et al.	
2011/0055338	A1	3/2011	Loeb et al.	
2011/0112893	A1	5/2011	Karlsson et al.	
2011/0113101	A1	5/2011	Ye et al.	
2011/0119264	A1	5/2011	Hu et al.	
2011/0137733	A1	6/2011	Baird et al.	
2011/0138298	A1	6/2011	Alfred et al.	
2011/0161792	A1	6/2011	Florence et al.	
2011/0208822	A1	8/2011	Rathod	
2011/0246255	A1	10/2011	Gilbert et al.	
2011/0246406	A1	10/2011	Lahav et al.	
2011/0258039	A1	10/2011	Patwa et al.	
2011/0270926	A1	11/2011	Boyd	
2011/0271175	A1	11/2011	Lavi et al.	
2011/0307331	A1	12/2011	Richard et al.	
2011/0320715	A1	12/2011	Ickman et al.	
2012/0012358	A1*	1/2012	Horan et al.	174/113 R
2012/0042389	A1	2/2012	Bradley et al.	
2012/0059722	A1	3/2012	Rao	
2012/0130918	A1*	5/2012	Gordon	705/347
2012/0136939	A1	5/2012	Stern et al.	
2012/0150973	A1	6/2012	Barak	
2012/0195422	A1*	8/2012	Famous	379/265.09
2012/0323346	A1	12/2012	Ashby et al.	
2013/0013362	A1	1/2013	Walker et al.	
2013/0036202	A1	2/2013	Lahav	
2013/0054707	A1*	2/2013	Muszynski et al.	709/206
2013/0117804	A1	5/2013	Chawla	
2013/0132194	A1	5/2013	Rajaram	
2013/0182834	A1	7/2013	Lauffer	
2013/0238714	A1	9/2013	Barak et al.	
2013/0268468	A1	10/2013	Vijayaraghavan et al.	
2013/0275862	A1	10/2013	Adra	
2013/0290533	A1	10/2013	Barak	
2013/0311874	A1	11/2013	Schachar et al.	
2013/0326375	A1	12/2013	Barak et al.	
2013/0336471	A1	12/2013	Agarwal et al.	
2014/0115466	A1	4/2014	Barak et al.	
2014/0222888	A1	8/2014	Karidi	

2014/0250051	A1	9/2014	Lahav et al.
2014/0310229	A1	10/2014	Lahav et al.
2014/0372240	A1	12/2014	Freishtat et al.
2015/0012602	A1	1/2015	Schorzman et al.
2015/0012848	A1	1/2015	Barak et al.
2015/0019525	A1	1/2015	Barak et al.
2015/0019527	A1	1/2015	Barak et al.
2015/0149571	A1	5/2015	Barak et al.
2015/0200822	A1	7/2015	Zelenko et al.
2015/0213363	A1	7/2015	Lahav et al.
2015/0248486	A1	9/2015	Barak et al.
2015/0278837	A1	10/2015	Lahav et al.

FOREIGN PATENT DOCUMENTS

EP	1276 064	A2	1/2003
EP	1549025	A1	6/2005
EP	1 840 803	A1	10/2007
EP	1845436	A2	10/2007
EP	1850284	A1	10/2007
FR	2 950 214	A1	3/2011
JP	9288453	A2	11/1997
JP	2004-054533		2/2004
KR	20040110399	A	12/2004
KR	20050010487	A	1/2005
KR	20080046310	A	5/2008
KR	20080097751	A	11/2008
WO	9722073	A1	6/1997
WO	9845797	A2	10/1998
WO	9909470	A1	2/1999
WO	9922328	A1	5/1999
WO	9944152	A1	9/1999
WO	00/57294	A1	9/2000
WO	0127825	A1	4/2001
WO	01/35272	A2	5/2001
WO	02/065367	A2	8/2002
WO	03/032146	A1	4/2003
WO	2004/057473	A1	7/2004
WO	2005/059777	A1	6/2005
WO	2007/044757	A1	4/2007
WO	2007/129625	A1	11/2007
WO	2008/057181	A2	5/2008
WO	2008/143382	A1	11/2008
WO	2009/029940	A1	3/2009
WO	2010/099632	A1	9/2010
WO	2010/119379	A1	10/2010
WO	2010/144207	A2	12/2010
WO	2011/127049	A1	10/2011
WO	2013/119808	A1	8/2013
WO	2013/158830	A1	10/2013
WO	2013/163426	A1	10/2013
WO	2015/021068	A2	2/2015

OTHER PUBLICATIONS

Just Answer (2004 Faq) Archive.org cache of www.justanswer.com circa (Dec. 2004), 8 pages.

Pack Thomas, "Human Search Engines the next Killer app," (Dec. 1, 2000) Econtent DBS vol. 23; Issue 6, 7 pages.

match.com "Match.com Launches Match.com Advisors," PR Newswire (Oct. 14, 2003), 2 pages.

SITEL, "SITEL to Provide Live Agent Support Online for Expertcity.com," PR Newswire (Feb. 28, 2000), 2 pages.

Webmaster World, "Link to my website is in a frame with banner ad at the top," www.webmasterworld.com (Nov. 11, 2003), 2 pages.

Bry et al., "Realizing Business Processes with ECA Rules: Benefits, Challenges, Limits," Principles and Practice of Sematic Web Reasoning Lecture Notes in Computer Science, pp. 48-62, LNCS, Springer, Berlin, DE (Jan. 2006).

Fairisaac, "How SmartForms for Blaze Advisor Works," www.fairisaac.com 12 pages (Jan. 2005).

Mesbah A et al., "A Component-and Push-Based Architectural Style for Ajax Applications," The Journal of Systems & Software, 81 (12): pp. 2194-2209, Elsevier North Holland, New York, NY US (Dec. 2008).

ORACLE Fusion Middleware Administrators Guide for Oracle SOA (Oracle Guide) Suite 11g Release 1 (11.1.1) Part No. E10226-02 www.docs.oracle.com (Oct. 2009), 548 pages.

(56)

References Cited**OTHER PUBLICATIONS**

"OAuth core 1.0 Revision A [XP002570263]," OAuth Core Workgroups, pp. 1-27 www.oauth.net/core/1.0a/ (retrieved Jan. 31, 2013), 24 pages.

Anon., "AnswerSoft Announces Concerto; First to Combine Call Center Automation with Power of Web," Business Wire, (Feb. 3, 1997) 3 pages.

Emigh, J., "AnswerSoft Unveils Concerto for Web-Based Call Centers Feb. 5, 1996," Newsbytes, (Feb. 5, 1997) 2 pages.

Grigonis, R., "Webphony—It's not Just Callback Buttons Anymore," Computer Telephony, (Dec. 1997) 4 pages.

Wagner, M., "Caring for Customers," Internet World, (Sep. 1, 1999) 3 pages.

Sweat, J., "Human Touch—A New Wave of E-Service Offerings Blends the Web, E-Mail, and Voice Bringing People back into the Picture," Information week, (Oct. 4, 1999) 2 pages.

Kirkpatrick, K., "Electronic Exchange 2000, The," Computer Shopper, (Nov. 1999) 5 pages.

Anon., "InstantService.com Teams with Island Data to provide Integrated Solution for Online Customer Response," Business Wire, (May 22, 2000) 3 pages.

Kersnar, S., "Countrywide Offers Proprietary Technology for Online Wholesale Lending," National Mortgage News, vol. 24, No. 38, (Jun. 5, 2000) 2 pages.

Douglas Armstrong, Firstar Web site helps add up future, Milwaukee Journal Sentinel, (Mar. 28, 1996) 3 pages.

redhat.com downloaded on Jul. 23, 2006.

apache.org downloaded on Jul. 23, 2006.

mysql.com downloaded on Jul. 23, 2006.

developer.com downloaded on Jul. 23, 2006.

Canter, Ronald S., "Lender Beware-Federal Regulation of Consumer Credit," Credit World, vol. 81, No. 5, pp. 16-20, (May 1993).

Staff, "On-Line System Approves Loans While Customer Waits," Communication News, vol. 31, Issue 9, (Sep. 1994) 3 pages.

"Low-Rent Loan Officer in a Kiosk," Bank Technology News vol. 8 No. 2, p. 9 (Feb. 1995) 2 pages.

Duclaux, Denise, "A Check for \$5,000 in Ten Minutes," ABA Banking Journal, vol. 87, No. 8, p. 45, AUQ. (1995) 2 pages.

"World Wide Web Enhances Customer's Choice," Cards International, No. 143, p. 9, (Nov. 1995) 2 pages.

Wells Fargo Launches First Real-Time, Online Home Equity Credit Decision-Making Service, Business Wire, (Jun. 3, 1998), Dialog File 621: New Product Announcement, 3 pages.

Handley, John, "Credit Review Lets the Numbers Do the Talking in Home Mortgage Game," Chicago Tribune (Jul. 1998) 3 pages.

Sherman, Lee, "Wells Fargo Writes a New Online Script," Interactive Week, vol. 5, No. 31, p. 29, (Aug. 1998) 2 pages.

Calvey, Mark, "Internet Gives Bankers a Snappy Comeback," San Francisco Business Times, vol. 13, No. 5, p. 3 (Sep. 1998) 2 pages.

McCormick, Linda, "Users of Credit Scoring Face Tough Rules on Notification," American Banker, Dialog File 625: American Banker Publications, (Mar. 21, 1982) 2 pages.

What the Credit Bureau is Saying About You: If a Mistake Sneaks Into Your Record, You May Not Know About it Until You Get Turned Down for Credit, Changing Times, vol. 37, p. 56, (Jul. 1983) 2 pages.

McShane, Peter K., "Got Financing?," Business Journal Serving Southern Tier, CNY, Mohawk Valley, Finger Lakes. North, vol. 11, Issue 19, p. 9, (Sep. 15, 1997) 3 pages.

Borowsky, Mark, "The Neural Net: Predictor of Fraud or Victim of Hype?," Bank Technology News Dialog File 16: PROMT, p. 7 (Sep. 1993) 2 pages.

FICO <http://houseloans.idis.com/fico> (2009) 1 page.

Altavista: search, FICO <http://www.altavista.com> (2001) 3 pages.

What Do FICO Scores Mean to Me?, <http://www.sancap.com>. (1999) 3 pages.

What is a FICO Score?, <http://www.aspeenloan.com> (2009) 1 page.

"Credit", The New Encyclopedia Britannica vol. 3 p. 722. (1994) 3 pages.

"Creditnet.com—An Online Guide to Credit Cards", <http://www.creditnet.com>. (1999) 1 page.

"Phillips 66 Introduces Mastercard with Rebate Feature", PR Newswire, p914NY067, (Sep. 14, 1995) 1 page.

Anon., "VAR Agreement Expands Credit Bureau Access.", (CCS America, Magnum Communications Ltd expand CardPac access, Computers in Banking, v6, n10, (1) (Oct. 1989) 2 pages.

Wortmann, Harry S., "Reengineering Update—Outsourcing: An Option Full of Benefits and Responsibilities", American Banker, (Oct. 24, 1994), p. 7A vol. 159, No. 205 3 pages.

Anon. "To Boost Balances, AT&T Renews No-Fee Universal Credit Card Offer", Gale Group Newsletter, V 10, N. 13, (Mar. 30, 1992) 2 pages.

Anon. "Citgo Puts a New Spin on the Cobranded Oil Card", Credit Card News, p. 4, (Nov. 1, 1995) 2 pages.

Anon. "Microsoft Targets More than PIM Market with Outlook 2000," Computer Reseller News, N. 805 pp. 99, (Aug. 31, 1998) 2 pages.

Chesnow, Neil, "Pick the Right Credit Cards—and use them wisely", Medical Economics, v. 75, n. 16, p. 94, (Aug. 24, 1998) 4 pages.

Friedland, Marc, "Credit Scoring Digs Deeper into Data", Credit World, v. 84, n. 5 p. 19-23, (May 1996) 5 pages.

Hollander, Geoffrey, "Sibling Tool Personator 3 untangles File Formats", InfoWorld, v20, n5, pp. 102 (Feb. 2, 1998) 2 pages.

Kantrow, Yvette D., "Banks Press Cardholders to Take Cash Advances", American Banker, v. 157, n. 18 pp. 1-2. (Jan. 28, 1992) 2 pages.

Lotus News Release: "Lotus Delivers Pre-Release of Lotus Notes 4.6 Client Provides Compelling New Integration with Internet Explorer", (May 20, 1997) 2 pages.

Stetenfeld, Beth, "Credit Scoring: Finding the Right Recipe", Credit Union Management, v. 17, n. 11, pp. 24-26 (Nov. 1994).

Block, Valerie, "Network Assembles Card Issuers at an Internet Site", Am. Banker, V160, (1998) 1 page.

CreditNet Financial Network <http://consumers.creditnet.com> (1999) 1 page.

Anon., "Lending Tree: Lending Tree Provides Borrowers Fast and Easy Online Access to Multiple Loan Offers," Business Wire, Jun. 23, 1998, 2 pages.

Anon, Regulation Z Commentary Amendments, Retail Banking Digest, vol. 15, No. 2, p. 17-18, (Mar.-Apr. 1995).

Anon, San Diego Savings Association Offers Customers No-Fee Visa Product, Card News, (Feb. 29, 1988) 1 page.

Bloom, J.K., "For This New Visa, Only Web Surfers Need Apply," American Banker, vol. 1163, No. 34 12 (Feb. 20, 1998) 2 pages.

Harney, K.R., "Realty Brokers, Lenders Face Restrictions," Arizona Republic, Final Chaser edition, Sun Living section, (Feb. 10, 1991) 2 pages.

Higgins, K.T., "Mr. Plastic Joins the Marketing Team," Credit Card Management, vol. 6, No. 3, pp. 26-30, Jun. 1993.

Microsoft Press Computer Dictionary, Third Edition, Microsoft Press, Redmond, 1997, 4 pages.

Whiteside, D.E., "One Million and Counting," Collections and Credit Risk, vol. 1, No. 11 (Nov. 1996) 5 pages.

Fickenscher, L., "Providian Undercuts rivals with 7.9% Rate Offer," American banker, vol. 163, Oct. 8, 1998, 2 pages.

Fargo, J., "The Internet Specialists," Credit Card Management, vol. 11, No. 10, pp. 38-45, Jan. 1999.

Lemay, T., "Browsing for a Mortgage a Click away," Financial Post, (Jan. 15, 2000) 1 page.

Wijnen, R., "Banks Fortify Online Services," Bank Technology News, vol. 13, No. 3, Mar. 2000, 3 pages.

Anon. "IAFC Launches NextCard, The First True Internet VISA," Business Wire, New York: (Feb. 6, 1998), 3 pages.

Lazarony, Lucy, "Only Online Applicants Need Apply," Bank Advertising News, North Palm Beach, Mar. 23, 1998, vol. 21, Issue 15, 3 pages.

FIData, Inc., News & Press Releases, "Instant Credit Union Loans via the Internet," <http://web.archive.org/web/19990221115203/www.fidata-inc.com/news-pr01.htm> (1999) 2 pages.

FIData, Inc., Press Releases, "Instant Loan Approvals via the Internet," http://www.fidata-inc.com/news/pr_040198.htm, (Apr. 1, 1998) 2 pages.

(56)

References Cited

OTHER PUBLICATIONS

Staff, "On-Line System Approves Loans While Customer Waits"—Abstract, Communication News, vol. 31, Issue 9, (Sep. 1994) 3 pages.

Anon. "Affordable Lending Systems Now Available for Smaller Financial Institutions," Business Wire, (May 18, 1998), 2 pages.

Nexis—All News Sources—Examiner's NPL Search Results in U.S. Appl. No. 11/932,498, included with Office Action issued Oct. 8, 2008, 14 pages.

"Sample Experian Credit Report" by Consumer Information consumerinfo.com (Jul. 9, 1998) 4 pages.

Plaintiffs Original Complaint, *Nextcard, LLC v. Liveperson, Inc.*; Civil Action No. 2:08-cv-00184-TJW, In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed Apr. 30, 2008 (7 pages).

Amended Complaint and Jury Demand; *Liveperson, Inc. v. Nextcard, LLC, et al.*; Civil Action No. 08-062 (GMS), in the U.S. District Court for the District of Delaware, filed Mar. 18, 2008 (5 pages).

Plaintiffs Second Amended Complaint; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed Apr. 9, 2008 (12 pages).

Defendants HSBC North America Holdings Inc.'s and HSBC USA Inc.'s Answer, Affirmative Defenses and Counterclaims to Plaintiffs Second Amended Complaint; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division filed (Apr. 28, 2008), 13 pages.

Answer and Counterclaims of Defendant DFS Services LLC; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed Apr. 28, 2008 (13 pages).

Defendant The PNC Financial Services Group, Inc.'s Answer and Affirmative Defenses to Second Amended Complaint; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed Apr. 28 2008, 10 pages.

Plaintiffs Second Amended Reply to Counterclaims of Defendants HSBC North America Holdings Inc. and HSBC USA Inc.; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed May 14, 2008, 5 pages.

Plaintiffs Second Amended Reply to Counterclaims of Defendant DFS Services LLC; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed May 14, 2008 (71 pages).

Plaintiffs Second Amended Reply to Counterclaims of Defendant American Express Company; *Nextcard, LLC v. American Express Company, et al.*; Civil Action No. 2:07-cv-354 (TJW); In the U.S. District Court for the Eastern District of Texas, Marshall Division, filed (May 8, 2008), 8 pages.

Justin Hibbard, Gregory Dalton, Mary E Thyfault. (Jun. 1998). "Web-based customer care." Information Week, (684) 18-20, 3 pages.

Kim S. Nash "Call all Customers." Computerworld, 32 (1), 25-28 (Dec. 1997), 2 pages.

PRN: "First American Financial Acquires Tele-Track Inc.," PR Newswire, (May 11, 1999), Proquest #41275773, 2 pages.

Young, Deborah, "The Information Store," (Sep. 15, 2000), Wireless Review, pp. 42, 44, 46, 48, 50.

Whiting et al., "Profitable Customers," (Mar. 29, 1999), Information Week, Issue 727, pp. 44, 45, 48, 52, 56.

Bayer, Judy, "A Framework for Developing and Using Retail Promotion Response Models," Ceres Integrated Solutions, retrieved from www.ceresion.com (2007) 5 pages.

Bayer, Judy, "Automated Response Modeling System for Targeted Marketing," (Mar. 1998), Ceres Integrated Solutions, 5 pages.

Sweet et al., "Instant Marketing," (Aug. 12, 1999), Information Week, pp. 18-20.

SmartKids.com "Chooses Quadstone—The Smartest Customer Data Mining Solution," (Jul. 31, 2000), Business Wire, 2 pages.

"NCR's Next Generation Software Makes True Customer Relationship Management a Reality," (Jul. 26, 1999) PR Newswire, 3 pages.

"Quadstone System 3.0 Meets New Market Demand for Fast, Easy-to-Use Predictive Analysis for CRM," (May 22, 2000) Business Wire, 3 pages.

"Net Perceptions Alters Dynamics of Marketing Industry with Introduction of Net Perceptions for Call Centers," (Oct. 12, 1998) PR Newswire, 3 pages.

"Ceres Targeted Marketing Application," Ceres Integrated Solutions: retrieved from www.ceresios.com/Product/index.htm (2007) 3 pages.

Prince, C. J., E:business: A Look at the Future, Chief Executive, vol. 154, (Apr. 2000), pp. 10-11.

Oikarinen et al. "Internet Relay Chat Protocol" RFC-1459, pp. 1-65, (May 1993).

eDiet.com: Personalized Diets, Fitness, and Counseling, (May 3, 1998), pp. 1-15.

Fiszer, Max; "Customizing an inbound call-center with skills-based routing," Telemarketing & Call Center Solutions, (Jan. 1997), v15i7 p. 24; Proquest #11267840, 5 pages.

"ESL Federal Credit Union Inaugurates Internet Target Marketing," PR Newswire p. 4210 (Oct. 6, 1998), 3 pages.

"Welcome to eStara—The Industry Leader in Click to Call and Call Tracking Solutions," e-Stara, Inc., retrieved from www.estara.com on Mar. 21, 2013, 1 page.

"Push to Talk Live Now! From your website" iTalkSystem, Inc., retrieved from www.italksystems.com on Mar. 21, 2013, 1 page.

Richardson et al., "Predicting Clicks: Estimating the Click-Through Rate for New Ads," (May 2007) 9 pages.

"Welcome to Keen" retrieved from www.archive.org/web/20010302014355/http://www.keen.com/ on Jan. 25, 2013, 1 page.

Christophe Destruel, Herve Luga, Yves Duthen, Rene Caubet. "Classifiers based system for interface evolution." Expertsys Conference, 265-270 (1997), 6 pages.

Ulla de Stricker, Annie Joan Olesen. "Is Management Consulting for You?" SEARCHER, 48-53 (Mar. 2005), 6 pages.

Humberto T. Marques Neto, Leonardo C.D. Rocha, Pedro H.C. Guerra, Jussara M. Almeida, Wagner Meira Jr., Virgilio A. F. Almeida. "A Characterization of Broadband User Behavior and Their E-Business Activities." ACM SIGMETRICS Performance Evaluation Review, 3-13 (2004), 11 pages.

Greg Bowman, Michael M. Danchak, Mary LaCombe, Don Porter. "Implementing the Rensselaer 80/20 Model in Professional Education." 30th ASEE/IEEE Frontiers in Education Conference, Session T3G (Oct. 18-21, 2000), 1 page.

Elizabeth Sklar Rozier, Richard Alterman. "Participatory Adaptation." CHI, 97, 261-262 (Mar. 22-27, 1997), 2 pages.

Frank White. "The User Interface of Expert Systems: What Recent Research Tells Us." Library Software Review, vol. 13, No. 2, p. 91-98 (Summer 1994) 8 pages.

Frederick W. Rook, Michael L. Donnell. "Human Cognition and the Expert System Interface: Mental Models and Inference Explanations." IEEE Transactions on Systems, Man, and Cybernetics, vol. 23, No. 6, p. 1649-1661 (Nov./Dec. 1993), 13 pages.

International Search Report and Written Opinion for PCT Application No. PCT/US2013/041147, mailed Jul. 30, 2013, 9 pages.

International Search Report and Written Opinion for PCT Application No. PCT/US2013/037086, mailed Jul. 12, 2013, 9 pages.

International Search Report and Written Opinion for PCT Application No. PCT/US2013/29389, mailed Jul. 24, 2013, 8 pages.

International Search Report and Written Opinion for PCT Application No. PCT/US2013/038212, mailed Jul. 17, 2013, 11 pages.

International Search Report for PCT Application No. PCT/US03/41090, mailed on Sep. 1, 2004, 3 pages.

International Search Report for PCT Application No. PCT/US05/40012, mailed on Oct. 5, 2007, 2 pages.

International Preliminary Report on Patentability for PCT Application No. PCT/US2006/039630, dated Apr. 16, 2008, 4 pages.

International Search Report for PCT Application No. PCT/US2011/031239, mailed on Jul. 7, 2011, 3 pages.

(56)

References Cited**OTHER PUBLICATIONS**

International Search Report for PCT Application No. PCT/US2011/064946, mailed on Jun. 22, 2012, 3 pages.

International Preliminary Report on Patentability for PCT Application No. PCT/US2011/031239, dated Oct. 9, 2012, 8 pages.

Non-Final Office Action of Dec. 11, 2008 for U.S. Appl. No. 11/394,078, 15 pages.

Final Office Action of Jul. 9, 2009 for U.S. Appl. No. 11/394,078, 15 pages.

Non-Final Office Action of Jan. 28, 2010 for U.S. Appl. No. 11/394,078, 14 pages.

Final Office Action of Jul. 9, 2010 for U.S. Appl. No. 11/394,078, 16 pages.

Non-Final Office Action of Feb. 1, 2011 for U.S. Appl. No. 11/394,078, 20 pages.

Final Office Action of Aug. 2, 2011 for U.S. Appl. No. 11/394,078, 23 pages.

Non-Final Office Action of May 16, 2012 for U.S. Appl. No. 11/394,078, 23 pages.

Final Office Action of Jan. 25, 2013 for U.S. Appl. No. 11/394,078, 22 pages.

Non-Final Office Action of Jun. 22, 2012 for U.S. Appl. No. 13/080,324, 9 pages.

Non-Final Office Action of Aug. 15, 2012 for U.S. Appl. No. 12/967,782, 31 pages.

Non-Final Office Action of Jul. 29, 2011 for U.S. Appl. No. 12/608,117, 20 pages.

Final Office Action of Apr. 4, 2012 for U.S. Appl. No. 12/608,117, 25 pages.

Non-Final Office Action of Apr. 24, 2004 for U.S. Appl. No. 09/922,753, 16 pages.

Final Office Action of Oct. 14, 2004 for U.S. Appl. No. 09/922,753, 13 pages.

Non-Final Office Action of May 17, 2005 for U.S. Appl. No. 09/922,753, 13 pages.

Non-Final Office Action of Mar. 14, 2006 for U.S. Appl. No. 09/922,753, 13 pages.

Final Office Action of Jul. 26, 2006 for U.S. Appl. No. 09/922,753, 13 pages.

Non-Final Office Action of Aug. 13, 2008 for U.S. Appl. No. 09/922,753, 10 pages.

Final Office Action of Apr. 23, 2009 for U.S. Appl. No. 09/922,753, 11 pages.

Non-Final Office Action of Jul. 21, 2009 for U.S. Appl. No. 09/922,753, 10 pages.

Final Office Action of Feb. 18, 2010 for U.S. Appl. No. 09/922,753, 9 pages.

Non-Final Office Action of Apr. 25, 2011 for U.S. Appl. No. 09/922,753, 9 pages.

Final Office Action of Nov. 25, 2011 for U.S. Appl. No. 09/922,753, 10 pages.

Non-Final Office Action of Aug. 7, 2007 for U.S. Appl. No. 10/980,613, 16 pages.

Non-Final Office Action of May 15, 2008 for U.S. Appl. No. 10/980,613, 23 pages.

Non-Final Office Action of Apr. 30, 2012 for U.S. Appl. No. 12/504,265, 16 pages.

Final Office Action of Aug. 28, 2012 for U.S. Appl. No. 12/504,265, 28 pages.

Final Office Action of Feb. 14, 2013 for U.S. Appl. No. 13/080,324, 11 pages.

Non-Final Office Action of Mar. 30, 2013 for U.S. Appl. No. 11/360,530, 23 pages.

Final Office Action of Apr. 11, 2013 for U.S. Appl. No. 12/967,782, 18 pages.

Non-Final Office Action of May 10, 2013 for U.S. Appl. No. 13/563,708, 20 pages.

Non-Final Office Action of Jun. 12, 2013 for U.S. Appl. No. 12/608,117, 56 pages.

Non-Final Office Action of Jun. 20, 2013 for U.S. Appl. No. 13/157,936, 19 pages.

Non-Final Office Action of Jun. 27, 2013 for U.S. Appl. No. 12/504,265, 11 pages.

Non-Final Office Action of Jul. 8, 2013 for U.S. Appl. No. 13/413,197, 10 pages.

Final Office Action of Oct. 21, 2013 for U.S. Appl. No. 12/504,265 14 pages.

Non-Final Office Action of Oct. 30, 2013 for U.S. Appl. No. 13/961,072, 10 pages.

Non-Final Office Action of Dec. 5, 2013 for U.S. Appl. No. 12/967,782, 14 pages.

Notice of Allowance of Jan. 3, 2014 for U.S. Appl. No. 11/360,530, 29 pages.

Final Office Action of Jan. 22, 2014 for U.S. Appl. No. 12/608,117, 45 pages.

Final Office Action of Jan. 27, 2014 for U.S. Appl. No. 13/563,708, 35 pages.

Non-Final Office Action of Jan. 30, 2014 for U.S. Appl. No. 13/413,158, 19 pages.

Notice of Allowance of Feb. 12, 2014 for U.S. Appl. No. 13/157,936, 33 pages.

Final Office Action of Feb. 19, 2014 for U.S. Appl. No. 13/961,072, 35 pages.

Non-Final Office Action of Feb. 20, 2014 for U.S. Appl. No. 10/980,613, 43 pages.

Notice of Allowance of Feb. 28, 2014 for U.S. Appl. No. 09/922,753, 13 pages.

Notice of Allowance of Mar. 25, 2014 for U.S. Appl. No. 12/504,265, 31 pages.

Notice of Allowance of Mar. 31, 2014 for U.S. Appl. No. 12/725,999, 41 pages.

Notice of Allowance of Apr. 1, 2014 for U.S. Appl. No. 13/413,197, 32 pages.

International Preliminary Report on Patentability for PCT Application No. PCT/US2013/29389, mailed Sep. 18, 2014, 6 pages.

International Search Report for PCT Application No. PCT/US2013/025142, mailed Jun. 5, 2013, 4 pages.

International Preliminary Report on Patentability for PCT Application No. PCT/US2013/025142, mailed Aug. 21, 2014, 5 pages.

Non-Final Office Action of Jul. 17, 2014 for U.S. Appl. No. 11/394,078, 16 pages.

Non-Final Office Action of Jul. 31, 2014 for U.S. Appl. No. 13/080,324, 12 pages.

Notice of Allowance of Aug. 18, 2014 for U.S. Appl. No. 12/967,782, 17 pages.

Non-Final Office Action of Aug. 21, 2014 for U.S. Appl. No. 10/980,613, 17 pages.

Notice of Allowance of Sep. 17, 2014 for U.S. Appl. No. 13/413,158, 14 pages.

Notice of Allowance of Sep. 26, 2014 for U.S. Appl. No. 13/563,708, 8 pages.

Final Office Action of Aug. 10, 2015 for U.S. Appl. No. 13/961,072, 12 pages.

Non-Final Office Action of Aug. 14, 2015 for U.S. Appl. No. 14/543,397, 12 pages.

Non-Final Office Action of Aug. 18, 2015 for U.S. Appl. No. 14/570,963, 23 pages.

Non-Final Office Action of Aug. 27, 2015 for U.S. Appl. No. 11/394,078, 21 pages.

Non-Final Office Action of Sep. 11, 2015 for U.S. Appl. No. 14/500,502; 12 pages.

Final Office Action of Sep. 18, 2015 for U.S. Appl. No. 14/288,258, 17 pages.

Notice of Allowance of Sep. 18, 2015 for U.S. Appl. No. 14/244,830, 11 pages.

First Action Interview Pilot Program Pre-Interview Communication of Oct. 21, 2015 for U.S. Appl. No. 14/313,511, 3 pages.

Final Office Action of Oct. 22, 2015 for U.S. Appl. No. 13/830,719, 29 pages.

Final Office Action of Nov. 10, 2015 for U.S. Appl. No. 13/841,434; 30 pages.

(56)

References Cited

OTHER PUBLICATIONS

Final Office Action of Nov. 17, 2015 for U.S. Appl. No. 12/608,117, 32 pages.
International Preliminary Report on Patentability for PCT Application No. PCT/US2013/038212, mailed Nov. 6, 2014, 8 pages.
International Preliminary Report on Patentability for PCT Application No. PCT/US2013/041147, mailed Jan. 22, 2015, 21 pages.
International Search Report and Written Opinion for PCT Application No. PCT/US14/49822, mailed Feb. 27, 2015, 11 pages.
Extended European Search Report dated Jul. 7, 2015 for European Patent Application No. 15161694.3; 8 pages.
Non-Final Office Action of Dec. 4, 2014 for U.S. Appl. No. 14/275,698, 6 pages.
Non-Final Office Action of Dec. 23, 2014 for U.S. Appl. No. 13/961,072, 11 pages.
Non-Final Office Action of Jan. 14, 2015 for U.S. Appl. No. 14/288,258, 12 pages.
Non-Final Office Action of Jan. 21, 2015 for U.S. Appl. No. 14/500,502, 8 pages.
Final Office Action of Jan. 29, 2015 for U.S. Appl. No. 14/245,400, 28 pages.
Final Office Action of Mar. 12, 2015 for U.S. Appl. No. 13/080,324, 13 pages.

Non-Final Office Action of Mar. 13, 2015 for U.S. Appl. No. 13/841,434, 26 pages.
Non-Final Office Action of Apr. 6, 2015 for U.S. Appl. No. 14/322,736, 13 pages.
Notice of Allowance of Mar. 30, 2015 for U.S. Appl. No. 14/275,698, 11 pages.
Non-Final Office Action of Apr. 9, 2015 for U.S. Appl. No. 13/830,719, 24 pages.
Non-Final Office Action of May 7, 2015 for U.S. Appl. No. 13/829,708, 16 pages.
Final Office Action of May 8, 2015 for U.S. Appl. No. 10/980,613, 18 pages.
Non-Final Office Action of May 13, 2015 for U.S. Appl. No. 14/317,346, 21 pages.
Non-Final Office Action of Jun. 2, 2015 for U.S. Appl. No. 12/608,117, 26 pages.
First Action Interview Pilot Program Pre-Interview Communication of Jun. 19, 2015 for U.S. Appl. No. 14/244,830, 7 pages.
Non-Final Office Action of Jul. 20, 2015 for U.S. Appl. No. 14/711,609; 12 pages.
Non-Final Office Action of Jul. 20, 2015 for U.S. Appl. No. 14/500,537; 12 pages.
Final Office Action of Jul. 31, 2015 for U.S. Appl. No. 14/317,346, 13 pages.

* cited by examiner

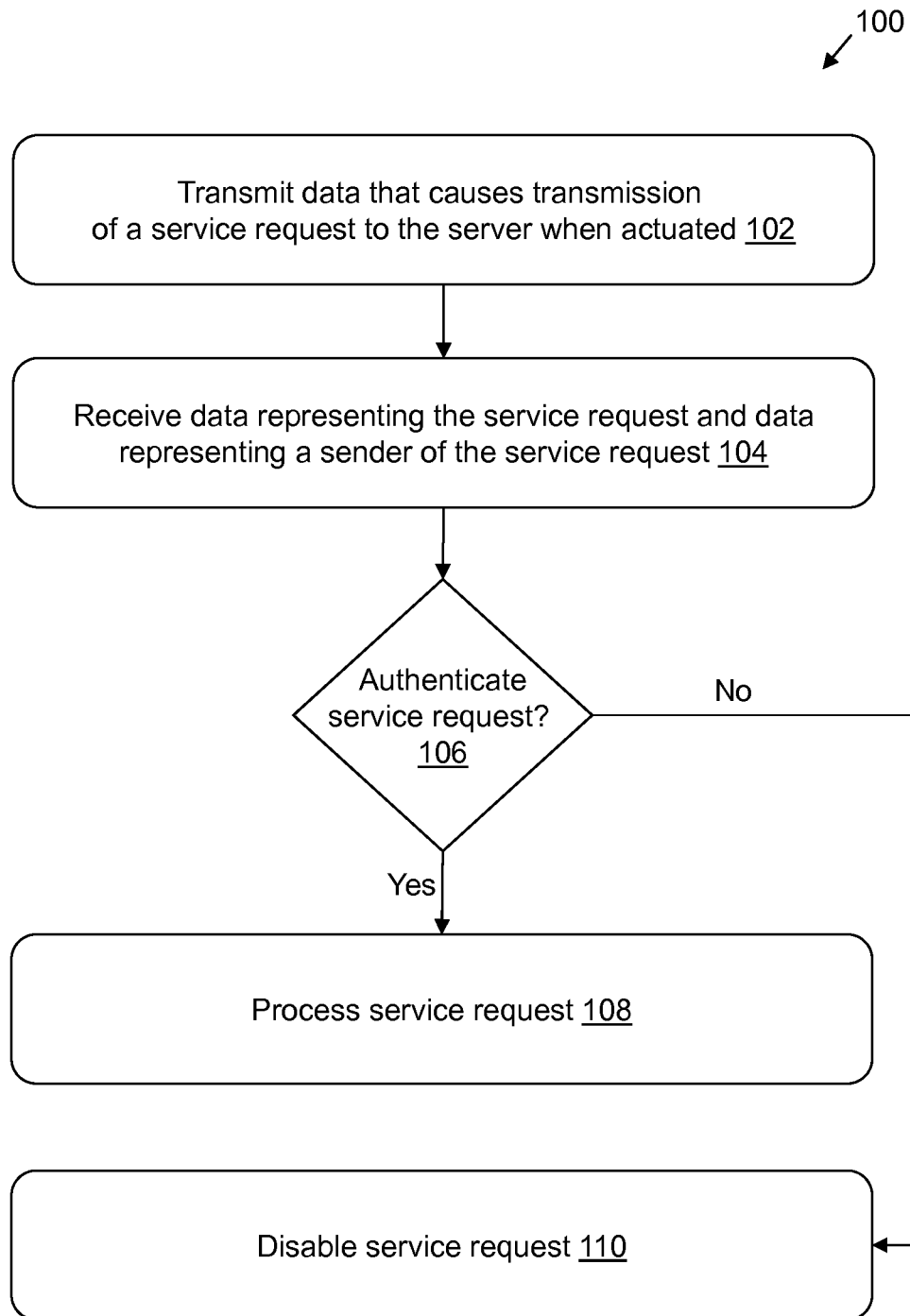


FIG. 1

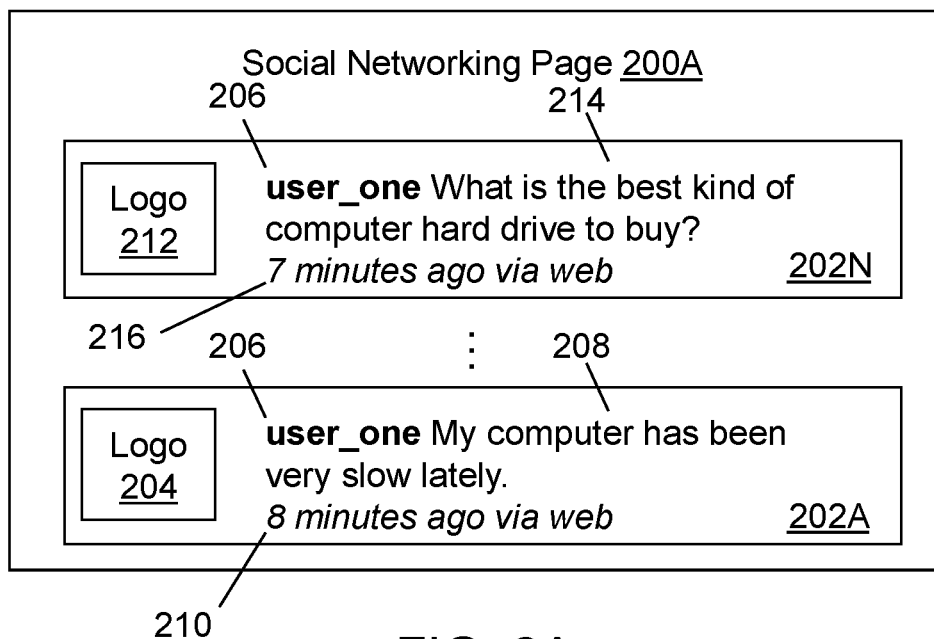


FIG. 2A

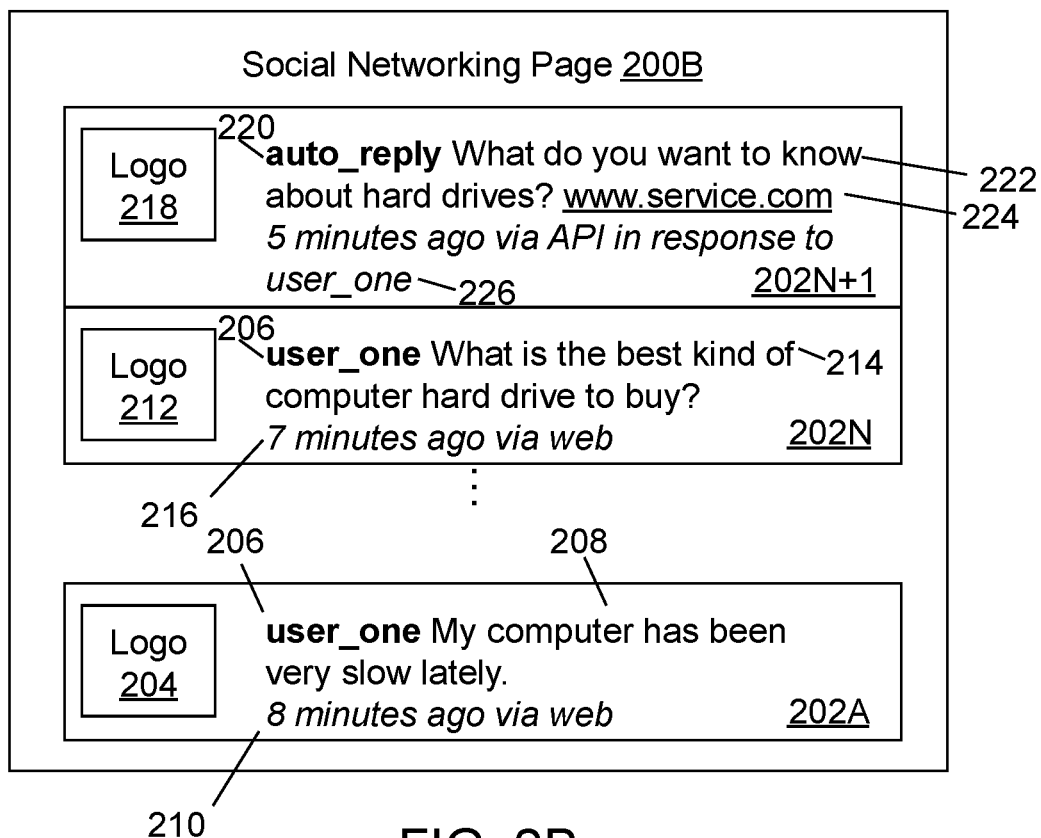


FIG. 2B

AUTHENTICATION OF SERVICE REQUESTS USING A COMMUNICATIONS INITIATION FEATURE

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority to U.S. Provisional Application No. 61/625,984, filed Apr. 18, 2012, and entitled "Authentication of Service Requests," which is incorporated herein by reference in its entirety for all purposes.

This application relates to and is assigned to the same entity as the co-pending U.S. patent application Ser. No. 12/967,782, filed on Dec. 14, 2010, entitled "Authentication of Service Requests Initiated From a Social Networking Site," the disclosure of which is hereby incorporated herein by reference in its entirety, and attached hereto as Appendix A. The systems and methods described herein can be used in combination with the systems and methods described in Appendix A. For example, the authentication techniques described in Appendix A can be used to authenticate users that invoke service requests, as described herein.

TECHNICAL FIELD

The technical field relates generally to computer-based methods and apparatuses, including computer program products, for authentication of service requests.

SUMMARY OF THE INVENTION

A brief summary of various exemplary embodiments is presented. Some simplifications and omissions may be made in the following summary, which is intended to highlight and introduce some aspects of the various exemplary embodiments, but not limit the scope of the invention. Detailed descriptions of a preferred exemplary embodiment adequate to allow those of ordinary skill in the art to make and use the inventive concepts will follow in the later sections.

In one aspect, a computerized method for authenticating user service requests is presented. A server transmits data that causes transmission of a service request to the server when actuated. The server receives data representing the service request and data representing a sender of the service request. The server compares (a) the data representing the service request, the data representing the sender of the service request, or both, against (b) pre-defined criteria associated with the data that causes transmission of the service request. The server processes the service request from the sender if the comparison authenticates the service request.

In other examples, any of the aspects above can include one or more of the following features. The data that causes transmission of a service request to the server when actuated comprises an HTTP link.

The techniques, which include both methods and apparatuses, described herein can provide one or more of the following advantages. Website links, such as HTTP links, can be authenticated based on the user that invoked the link, as well as pre-defined criteria for the link, such as an expiration time, a number of users that can invoke the link, and/or the like. Data received about service requests and/or the users that invoke the service requests can be used to appropriately tailor the service request for each user.

Other aspects and advantages of the present invention will become apparent from the following detailed description,

taken in conjunction with the accompanying drawings, illustrating the principles of the invention by way of example only.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other aspects, features, and advantages of the present invention, as well as the invention itself, will be more fully understood from the following description of various embodiments, when read together with the accompanying drawings.

FIG. 1 is a flow chart showing an example method for processing a service request.

FIGS. 2A and 2B are diagrams of an example social networking page for a social networking site according to the present invention.

DETAILED DESCRIPTION

In general, computerized systems and methods are provided for creating links (e.g., web page links, such as HTML links) that can be authenticated by a server. Data about the links and/or the user(s) that invoke the links can be used to authenticate the link based on pre-defined criteria stored for the link. The service request links can be configured based on the pre-defined criteria. For example, the service request links can expire based on the pre-defined criteria such that the links can be invoked only for a predetermined period of time, can only be invoked by a predetermined number of users, can only be invoked by particular users (e.g., based on profile data of the user), etc. This data can be used to navigate the invoking user to the proper location (e.g., to a service request (such as chat or video), or to a particular web page).

FIG. 1 is a flow chart showing an exemplary method 100 for processing a service request. At step 102, the server transmits data that causes transmission of a service request to the server when actuated. At step 104, the server receives data representing the service request and data representing a sender of the service request. At step 106, the server authenticates the service request. If the server authenticates the service request at step 106, the method proceeds to step 108, and the server processes the service request. If the server does not authenticate the service request at step 106, the method proceeds to step 110, and the server disables the service request.

Referring to step 102, the data that causes transmission of a service request to the server when actuated can be, for example, an HTTP link. For example, the link, when actuated (and authenticated as described with respect to step 106 below) can initiate any type of a service request, such as online text chat, audio chat, presentation of a support page (e.g., frequently asked questions), presentation of a coupon, video chat, and/or other types of service requests. The server can send service requests to a remote user for help with navigating a web page, to a remote user in response to a social media message (e.g., in response to a Twitter tweet or a Facebook post), to a remote user by email, a data messaging service (e.g., short messaging service (SMS)), etc. As is described further below, administrators of the server (and related components) can set pre-defined criteria for the service request (e.g., for an HTML link) that configure when the service request can be invoked (e.g., a time expiration).

Referring to step 104, the data representing the service request can include, for example, data about the service request (e.g., about an HTML link), and/or data about the user that invoked the service request (e.g., about the user that clicked the HTML link). For example, if the server transmits an HTML link to a web page, the data representing the service

request can include identifying data for the service request (e.g., so the system can identify which service request was invoked), a number of times the HTML link was invoked prior to the current invocation (e.g., a number of times the link was clicked), an amount of time the HTML link has been on the web page, and/or other data about the service request.

Referring further to step 104, the data representing a sender of the service request can include data about the party that invoked the service request. For example, this data may include social networking information, as described in Appendix A (e.g., a user profile for the user from the social networking site).

Referring to step 106, the server authenticates the service request. For example, unless certain properties of the service request are satisfied (e.g., a time limit has not expired, a pre-set number of users have not already invoked the service request, the invoking user matches pre-defined criteria (e.g., the service request was sent to the user, the user is a follower of a social networking site, located in a particular geographic location, and/or the link)), then the server will not authenticate the service request.

Referring further to step 106, the server can compare the data received at step 104 with stored data for the service request. For example, in some embodiments the server compares (a) the data representing the service request, the data representing the sender of the service request, or both, against (b) pre-defined criteria associated with the data the server transmitted in step 102. For example, the pre-defined criteria can be defined by the system administrator. For example, for an HTTP link, the administrator can set a number of times the link can be clicked before the link expires (e.g., can no longer be clicked by a user to invoke the service request), an amount of time the link is active until the link expires, required social networking profile information (e.g., indicative of the originator, such as geographical location and/or other user profile information), etc.

Referring further to step 106, if the server authenticates the service request such that the pre-defined criteria are satisfied (e.g., if the time limit associated with the service request has not expired, if the maximum number of users has not invoked the service request, if the social networking data associated with the user that invoked the request matches the pre-defined criteria, etc.), the server processes the service request at step 108. The server can process the service request by setting up the service request, such as by transmitting a coupon to the sender, setting up an online chat with the sender, setting up a video chat with the sender, sending the user to a help page, and/or setting up any other type of service request.

If the server determines the service request is not authenticated (e.g., if the time limit associated with the service request expired, if the maximum number of users already invoked the service request, if the social networking data associated with the user that invoked the request does not match the pre-defined criteria, etc.), then the server disables the service request at step 110. For example, the server may transmit back to the sender an HTTP error page, a blank page, a page that indicates the link expired and therefore will not be completed, etc.

The authentication allows administrators and agents of the server to create and/or reconnect service requests (e.g., click-to-chat links) that can be limited to a number of users, time expirations, social networking attributes of the sender, etc. For example, if an agent is communicating with a user via online chat and the conversation is dropped, the server can create a link that allows the visitor to return back to the agent he was chatting with, but will only work based on pre-defined criteria associated with the link (e.g., a set number of clicks,

time expiration, etc.). The link itself can be sent to the visitor as a regular HTTP link, as SMS, email, or via the original chat itself.

As an example, assume an agent is engaged in a service request with a user (e.g., online chat), and the agent needs to re-boot their computer. The agent can send the user a link so agent can be re-connected with the user after the reboot to resume their conversation. Advantageously, while the server can transmit a link that allows the user to re-engage the service request, the system can use pre-defined criteria to ensure only the same user can re-engage the service request (e.g., based on social networking data), and that the agent is still connected to the system (e.g., limit the link's active time to one hour).

As another example, assume an agent is busy but wants to talk (e.g., online chat, video chat, voice chat) with a user, and the agent determines the best time for a chat is between 4-5 PM EST. The agent (via the server) can send the user a link that is valid only from 4-5 PM (e.g., if the user clicks the link between 4-5 PM, the server will process the service request, otherwise the server will not process the service request). For example, if the user clicks the link outside of the 4-5 PM window, then the server can redirect the user to a landing page.

As another example, the server can use the links to initiate a call sequence. For example, the agent may be available for a call before 5 PM that day. The server can send the user a link that is valid only until 5 PM (e.g., if the user clicks the link any time before 5 PM that day, the server will process the service request, otherwise the server will not process the service request). If properly invoked, the server will initiate a call sequence between the user and the agent.

As another example, the server can use the links for an advertisement campaign (e.g., for marketing content). The server can send links such that the first users that click the link (e.g., the first 100 users) get a special discount (e.g., are presented with a coupon). As another example, the link can be used to keep track of a number of times people scan a bar code to keep track of how many users scan the code. The user can then be presented with a coupon related to the bar code, establish a service request (e.g., chat), and/or the like.

As another example, the validation can validate the sender that invokes the service request (e.g., to verify the sender). For example, social networking parameters (e.g., a profile page) can be used to verify the sender (e.g., if the request is transmitted from a social networking site). For example, a company may monitor tweets posted to Twitter. The company may see a tweet that states "I don't like the services of Company." The Company can use the server (e.g., manually or automatically) to send a link to the author of the tweet to invoke a service request. For example, the link can be used to invoke a chat with a Company representative (via online chat, video chat, etc.) to discuss their dislikes of the Company, to send the user to a support page to help explain the Company's services, etc. The link, once clicked, can navigate the user to any type of service request channel (such as chat, video, a support page, etc.) based on the time the link exists, the number of clicks, and/or the social parameters of the user (e.g., who the user is, and what the user's location is, etc.). As an example, the social parameters can be used to navigate visitors from Europe to a European chat page, visitors from the US to a US chat page, etc. The social networking parameters can be used to tailor how the service request channels are invoked for each particular user.

The above-described techniques can be implemented in digital and/or analog electronic circuitry, or in computer hardware, firmware, software, or in combinations of them. The

implementation can be as a computer program product, i.e., a computer program tangibly embodied in a machine-readable storage device, for execution by, or to control the operation of, a data processing apparatus, e.g., a programmable processor, a computer, and/or multiple computers. A computer program can be written in any form of computer or programming language, including source code, compiled code, interpreted code and/or machine code, and the computer program can be deployed in any form, including as a stand-alone program or as a subroutine, element, or other unit suitable for use in a computing environment. A computer program can be deployed to be executed on one computer or on multiple computers at one or more sites.

Method steps can be performed by one or more processors executing a computer program to perform functions of the invention by operating on input data and/or generating output data. Method steps can also be performed by, and an apparatus can be implemented as, special purpose logic circuitry, e.g., a FPGA (field programmable gate array), a FPA (field-programmable analog array), a CPLD (complex programmable logic device), a PSoC (Programmable System-on-Chip), ASIP (application-specific instruction-set processor), or an ASIC (application-specific integrated circuit). Subroutines can refer to portions of the computer program and/or the processor/special circuitry that implement one or more functions.

Processors suitable for the execution of a computer program include, by way of example, both general and special purpose microprocessors, and any one or more processors of any kind of digital or analog computer. Generally, a processor receives instructions and data from a read-only memory or a random access memory or both. The essential elements of a computer are a processor for executing instructions and one or more memory devices for storing instructions and/or data. Memory devices, such as a cache, can be used to temporarily store data. Memory devices can also be used for long-term data storage. Generally, a computer also includes, or is operatively coupled to receive data from or transfer data to, or both, one or more mass storage devices for storing data, e.g., magnetic, magneto-optical disks, or optical disks. A computer can also be operatively coupled to a communications network in order to receive instructions and/or data from the network and/or to transfer instructions and/or data to the network. Computer-readable storage devices suitable for embodying computer program instructions and data include all forms of volatile and non-volatile memory, including by way of example semiconductor memory devices, e.g., DRAM, SRAM, EPROM, EEPROM, and flash memory devices; magnetic disks, e.g., internal hard disks or removable disks; magneto-optical disks; and optical disks, e.g., CD, DVD, HD-DVD, and Blu-ray disks. The processor and the memory can be supplemented by and/or incorporated in special purpose logic circuitry.

To provide for interaction with a user, the above described techniques can be implemented on a computer in communication with a display device, e.g., a CRT (cathode ray tube), plasma, or LCD (liquid crystal display) monitor, for displaying information to the user and a keyboard and a pointing device, e.g., a mouse, a trackball, a touchpad, or a motion sensor, by which the user can provide input to the computer (e.g., interact with a user interface element). Other kinds of devices can be used to provide for interaction with a user as well; for example, feedback provided to the user can be any form of sensory feedback, e.g., visual feedback, auditory feedback, or tactile feedback; and input from the user can be received in any form, including acoustic, speech, and/or tactile input. The above described techniques can also be imple-

mented on mobile devices (e.g., a smartphone, a personal digital assistant device, a cellular telephone, a laptop).

The above described techniques can be implemented in a distributed computing system that includes a back-end component. The back-end component can, for example, be a data server, a middleware component, and/or an application server. The above described techniques can be implemented in a distributed computing system that includes a front-end component. The front-end component can, for example, be a client computer having a graphical user interface, a Web browser through which a user can interact with an example implementation, and/or other graphical user interfaces for a transmitting device. The above described techniques can be implemented in a distributed computing system that includes any combination of such back-end, middleware, or front-end components.

The computing system can include clients and servers. A client and a server are generally remote from each other and typically interact through a communication network. The relationship of client and server arises by virtue of computer programs running on the respective computers and having a client-server relationship to each other.

The components of the computing system can be interconnected by any form or medium of digital or analog data communication (e.g., a communication network). Examples of communication networks include circuit-based and packet-based networks. Packet-based networks can include, for example, the Internet, a carrier internet protocol (IP) network (e.g., local area network (LAN), wide area network (WAN), campus area network (CAN), metropolitan area network (MAN), home area network (HAN)), a private IP network, an IP private branch exchange (IPBX), a wireless network (e.g., radio access network (RAN), 802.11 network, 802.16 network, general packet radio service (GPRS) network, HiperLAN), and/or other packet-based networks. Circuit-based networks can include, for example, the public switched telephone network (PSTN), a private branch exchange (PBX), a wireless network (e.g., RAN, bluetooth, code-division multiple access (CDMA) network, time division multiple access (TDMA) network, global system for mobile communications (GSM) network), and/or other circuit-based networks.

Devices of the computing system and/or computing devices can include, for example, a computer, a computer with a browser device, a telephone, an IP phone, a mobile device (e.g., cellular phone, personal digital assistant (PDA) device, laptop computer, electronic mail device, iPhone available from Apple®), a server, a rack with one or more processing cards, special purpose circuitry, and/or other communication devices. The browser device includes, for example, a computer (e.g., desktop computer, laptop computer) with a world wide web browser (e.g., Microsoft® Internet Explorer® available from Microsoft Corporation, Mozilla® Firefox available from Mozilla Corporation, Chrome available from Google®, Safari available from Apple®, etc.). A mobile computing device includes, for example, a BlackBerry®. IP phones include, for example, a Cisco® Unified IP Phone 7985G available from Cisco System, Inc. and/or a Cisco® Unified Wireless Phone 7920 available from Cisco System, Inc.

One skilled in the art will realize the invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The foregoing embodiments are therefore to be considered in all respects illustrative rather than limiting of the invention described herein. Scope of the invention is thus indicated by the appended claims, rather than by the foregoing description,

and all changes that come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

FIGS. 2A and 2B are diagrams of example social networking pages 200A and 200B, respectively, for a social networking site according to the present invention. Social networking page 200A includes posted messages 202A through 202N (collectively posted messages 202). Posted message 202A can include a logo 204, username user_one 206, content 208 (i.e., “My computer has been very slow lately”), and posting information 210 (i.e., “8 minutes ago via web”). The username user_one 206 indicates which user posted the message 202A (e.g., a user of a user device). This can be advantageous, for example, to tell users apart when multiple user devices are posting messages for a particular message thread or message board. The content 208 can include the text that the posting user user_one 206 entered for the posted message 202A. The posting information 210 can indicate how long ago user_one 206 posted the message 202A (i.e., 8 minutes ago) and how user_one 206 posted the message (i.e., via the web).

Posted message 202N can include a logo 212, username user_one 206, content 214 (i.e., “What is the best kind of computer hard drive to buy?”), and posting information 216 (i.e., “7 minutes ago via web”). Posted messages 202 are used for illustrative purposes only and are not intended to be limiting. One skilled in the art can appreciate that the information contained within the posted messages 202 can be modified without departing from the spirit of the techniques described herein.

The social media account associated with user_one 206 (where “user_one” is a screen name representative of a particular user device or of an operator of the user device) can post message 202A to the social networking server 102. One minute later user_one 206 posted the posted (using a user device 104) message 202N to the social networking server 102. User_one 206 can configure his account with the social networking site to control which other users can see posted messages 202A and 202N. There can be posted messages by other users between posted messages 202A and 202N (e.g., a different user device can post a message in response to posted message 202A). For example, all people following the posts on social networking page 200A can see posted message 202A and can choose to post a message in response. Similarly, for example, any person that user_one 206 has established a relationship within the social networking site (e.g., friends) can view the posted message 202A, and/or any user device can view posted message 202A.

The social networking page 200B in FIG. 2B includes posted messages 202A and 202N from FIG. 2A and also includes posted message 202N+1. Posted message 202N+1 includes a logo 218, username auto_reply 220, content 222 (i.e., “What do you want to know about hard drives?”), a link 224 that causes transmission of a service request to a monitoring server, and posting information 226 (i.e., “5 minutes ago via API in response to user_one”). The posting information 226 indicates that posted message 202N+1 was posted by auto_reply 220 (e.g., a user with the screen name “auto_reply,” which may correspond to an individual user or a company) five minutes ago via an API (e.g., an API to the social networking site provided by a social networking server, which allows messages to be posted in response to a user’s message) in response to the posted message 202N by user_one 206. The posted message 202N+1 can be transmitted automatically (e.g., by a monitoring server based on rules stored in a database) or manually (e.g., by an operator of a monitoring server).

What is claimed is:

1. A computer-implemented method, comprising:
 - detecting a message communicated using a social networking account, wherein the social networking account is associated with a customer communications apparatus;
 - determining that the message satisfies a response criteria, wherein determining that the message satisfies the response criteria includes determining that the message articulates a comment and refers to a pre-determined entity associated with the response criteria;
 - selecting a customer service communications apparatus associated with the pre-determined entity;
 - transmitting code, wherein the transmitted code causes a communications initiation feature to be displayed at the customer communications apparatus associated with the social networking account, wherein the communications initiation feature is associated with a stored credential, and wherein the transmitted code causes the communications initiation feature to become selectable at a future time;
 - receiving selection information representing a selection of the communications initiation feature, wherein the selection information includes a parameter associated with the selection of the communications initiation feature and origin information, the origin information representing the social networking account from which the message was communicated;
 - validating the selection of the communications initiation feature, wherein validating includes using the origin information to identify that the selection information is associated with the social networking account and using the parameter to compare the selection information with the stored credential associated with the communications initiation feature; and
 - facilitating communications between the customer communications apparatus and the customer service communications apparatus when the selection of the communications initiation feature is successfully validated.
2. The method of claim 1, wherein facilitating communications includes relaying communications between the customer communications apparatus and the customer service communications apparatus.
3. The method of claim 1, further comprising:
 - receiving invitee information from the customer service communications apparatus, the invitee information specifying an additional social networking account; and
 - transmitting additional code that causes an additional communications initiation feature to be displayed at an additional customer communications apparatus upon the additional social networking account being activated at the additional customer communications apparatus.
4. The method of claim 3, further comprising:
 - receiving additional selection information representing a selection of the additional communications initiation feature, wherein the additional selection information is received from an additional computing apparatus and includes validation information including credentials associated with the additional social networking account;
 - validating the selection of the additional communications feature by using the validation information; and
 - facilitating communications between the additional customer communications apparatus and a customer service communications apparatus when the selection of the additional communications feature is validated.
5. The method of claim 4, wherein transmitting the additional code is such that the code is received at a server that

9

facilitates communications between accounts of the social network, and wherein the server forwards the code to the additional customer communications apparatus.

6. The method of claim 1, further comprising:

receiving subsequent scheduling information from a communications apparatus, the subsequent scheduling information representing a future time period;

transmitting additional code, wherein the additional code causes an additional communications initiation feature to be displayed at a communications apparatus prior to becoming selectable, wherein the additional code causes the additional communications initiation feature, while still being displayed, to become selectable at the beginning of the future time period, and wherein the additional code prevents selection of the additional communications initiation feature at the end of the future time period.

7. The method of claim 1, wherein the method is executed at a server, and wherein the facilitating communications includes facilitating chat communications.

8. The method of claim 1, wherein facilitating communications includes facilitating live video communications.

9. The method of claim 1, wherein the communications initiation feature is a hypertext transfer protocol link.

10. A system, comprising:

a processor; and

a storage medium containing instructions which, when executed on the processor, causes the processor to perform operations including:

detecting a message communicated using a social networking account, wherein the social networking account is associated with a customer communications apparatus;

determining that the message satisfies a response criteria, wherein determining that the message satisfies the response criteria includes determining that the message articulates a comment and refers to a pre-determined entity associated with the response criteria;

selecting a customer service communications apparatus associated with the pre-determined entity;

transmitting code, wherein the transmitted code causes a communications initiation feature to be displayed at the customer communications apparatus associated with the social networking account, wherein the communications initiation feature is associated with a stored credential, and wherein the transmitted code causes the communications initiation feature to become selectable at a future time;

receiving selection information representing a selection of the communications initiation feature, wherein the selection information includes a parameter associated with the selection of the communications initiation feature and origin information, the origin information representing the social networking account from which the message was communicated;

validating the selection of the communications initiation feature, wherein validating includes using the origin information to identify that the selection information is associated with the social networking account and using the parameter to compare the selection information with the stored credential associated with the communications initiation feature; and

facilitating communications between the customer communications apparatus and the customer service communications apparatus when the selection of the communications initiation feature is successfully validated.

10

11. The system of claim 10, wherein facilitating communications includes relaying communications between the customer communications apparatus and the customer service communications apparatus.

12. The system of claim 10, wherein the operations further include:

receiving invitee information from the customer service communications apparatus, the invitee information specifying an additional social networking account; and transmitting additional code that causes an additional communications initiation feature to be displayed at an additional customer communications apparatus upon the additional social networking account being activated at the additional customer communications apparatus.

13. The system of claim 12, wherein the operations further include:

receiving additional selection information representing a selection of the additional communications initiation feature, wherein the additional selection information is received from an additional computing apparatus and includes validation information including credentials associated with the additional social networking account;

validating the selection of the additional communications feature by using the validation information; and facilitating communications between the additional customer communications apparatus and a customer service communications apparatus when the selection of the additional communications feature is validated.

14. The system of claim 13, wherein transmitting the additional code is such that the code is received at a server that facilitates communications between accounts of the social network, and wherein the server forwards the code to the additional customer communications apparatus.

15. The system of claim 10, wherein the operations further include:

receiving subsequent scheduling information from a communications apparatus, the subsequent scheduling information representing a future time period;

transmitting additional code, wherein the additional code causes an additional communications initiation feature to be displayed at a communications apparatus prior to becoming selectable, wherein the additional code causes the additional communications initiation feature, while still being displayed, to become selectable at the beginning of the future time period, and wherein the additional code prevents selection of the additional communications initiation feature at the end of the future time period.

16. The system of claim 10, wherein the system includes a server, and wherein the facilitating communications includes facilitating chat communications.

17. The system of claim 10, wherein facilitating communications includes facilitating live video communications.

18. The system of claim 10, wherein the communications initiation feature is a hypertext transfer protocol link.

19. A computer-program product tangibly embodied in a non-transitory machine-readable storage medium having instructions stored thereon, the instructions operable to cause a processing apparatus to perform operations including:

detecting a message communicated using a social networking account, wherein the social networking account is associated with a customer communications apparatus; determining that the message satisfies a response criteria, wherein determining that the message satisfies the response criteria includes determining that the message

11

articulates a comment and refers to a pre-determined entity associated with the response criteria;
 selecting a customer service communications apparatus associated with the pre-determined entity;
 transmitting code, wherein the transmitted code causes a communications initiation feature to be displayed at the customer communications apparatus associated with the social networking account, wherein the communications initiation feature is associated with a stored credential, and wherein the transmitted code causes the communications initiation feature to become selectable at a future time;
 receiving selection information representing a selection of the communications initiation feature, wherein the selection information includes a parameter associated with the selection of the communications initiation feature and origin information, the origin information representing the social networking account from which the message was communicated;
 validating the selection of the communications initiation feature, wherein validating includes using the origin information to identify that the selection information is associated with the social networking account and using the parameter to compare the selection information with the stored credential associated with the communications initiation feature; and
 facilitating communications between the customer communications apparatus and the customer service communications apparatus when the selection of the communications initiation feature is successfully validated.

20. The computer-program product of claim 19, wherein facilitating communications includes relaying communications between the customer communications apparatus and the customer service communications apparatus.

21. The computer-program product of claim 19, wherein the operations further include:
 receiving invitee information from the customer service communications apparatus, the invitee information specifying an additional social networking account; and
 transmitting additional code that causes an additional communications initiation feature to be displayed at an additional customer communications apparatus upon the additional social networking account being activated at the additional customer communications apparatus.

22. The computer-program product of claim 21, wherein the operations further include:
 receiving additional selection information representing a selection of the additional communications initiation feature, wherein the additional selection information is received from an additional computing apparatus and includes validation information including credentials associated with the additional social networking account;

12

validating the selection of the additional communications feature by using the validation information; and
 facilitating communications between the additional customer communications apparatus and a customer service communications apparatus when the selection of the additional communications feature is validated.

23. The computer-program product of claim 22, wherein transmitting the additional code is such that the code is received at a server that facilitates communications between accounts of the social network, and wherein the server forwards the code to the additional customer communications apparatus.

24. The computer-program product of claim 19, wherein the operations further include:
 receiving subsequent scheduling information from a communications apparatus, the subsequent scheduling information representing a future time period;
 transmitting additional code, wherein the additional code causes an additional communications initiation feature to be displayed at a communications apparatus prior to becoming selectable, wherein the additional code causes the additional communications initiation feature, while still being displayed, to become selectable at the beginning of the future time period, and wherein the additional code prevents selection of the additional communications initiation feature at the end of the future time period.

25. The computer-program product of claim 19, wherein the system includes a server, and wherein the facilitating communications includes facilitating chat communications.

26. The computer-program product of claim 19, wherein facilitating communications includes facilitating live video communications.

27. The computer-program product of claim 19, wherein the communications initiation feature is a hypertext transfer protocol link.

28. The computer-implemented method of claim 1, wherein parameters include a number of times the communications initiations feature was previously selected, a sender profile associated with the social networking account, an amount of time the communications initiation feature has been displayed, or a time of the selection of the communications initiation feature.

29. The computer-implemented method of claim 1, wherein the stored credential is associated with an administrator server.

30. The computer-implemented method of claim 1, wherein comparing includes determining whether the parameter matches the stored credential.

* * * * *